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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/039,465	11/09/2001	Cary A. Jardin	76712/13588	1043
23380	7590	02/10/2005	EXAMINER	
TUCKER, ELLIS & WEST LLP 1150 HUNTINGTON BUILDING 925 EUCLID AVENUE CLEVELAND, OH 44115-1475			NEURAUTER, GEORGE C	
			ART UNIT	PAPER NUMBER
			2143	

DATE MAILED: 02/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/039,465

Applicant(s)

JARDIN, CARY A.

Examiner

George C. Neurauter, Jr.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 November 2001.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-11 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 03262002, 01132003.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

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**DETAILED ACTION**

Claims 1-11 are currently presented and have been examined.

***Claim Objections***

Claim 11 is objected to because of the following informalities:

Claim 11 recites a system that includes means plus function language. This is non-statutory subject matter since only a machine or manufacture may have means or step plus function language, however, if this claim were amended to claim a machine or manufacture, then this claim would be directed to statutory subject matter.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4 and 6-11 are rejected under 35 U.S.C. 102(b) as being anticipated by "NT Network Plumbing: Routers, Proxies, and Web Services" by Northrup.

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Regarding claim 1, Northrup discloses a method of improving network database performance comprising the steps of:

a) determining whether a first network packet involves a database transaction; b) intercepting the first network packet upon a positive determination in step a); (page 1, paragraph beginning "Proxy server is a general term...", specifically "Proxy server is a general term for any node on a network that accepts or intercepts connections from clients..."; page 11, section "Application-Layer Proxying", subsection "Specific Applications", paragraph beginning "HTTP proxies work by accepting connections from a client...", specifically "HTTP proxies work by accepting connections from a client, listening to the command the client issues, and interpreting that command...")

c) determining the nature of the database transaction; d) selectively implementing a database acceleration technique (referred to within the reference as "caching") based upon the determination in step c); (page 11, section "section "Application-Layer Proxying", subsection "Specific Applications", paragraph beginning "HTTP proxies work by accepting connections from a client...", specifically "HTTP proxies work by accepting connections from a client, listening to the command the client issues, and interpreting that command,

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which initiates an outbound connection"; page 23, section "Caching", paragraphs beginning "Here's an example. Joe's a member of a 500-person..." and "However, the benefits of caching will soon become...", specifically "As they request the same scores that Joe was looking at, their requests are sent to the proxy server as well. The proxy server then returns those requests from the information it had gathered in the course of processing Joe's request.")

e) creating a second network packet; and f) selectively masking at least one of the source and destination addresses of the second network packet based upon the determination in step c). (page 19, section "Transparaent Proxying", subsection "How Does Transparent Proxying Work?", paragraph beginning "When transparent proxy servers forward traffic...", specifically "When transparent proxy servers forward traffic, they strip off and replace both the data-link layer header and the network-layer header. When the proxy server receives the packet, the source IP address identifies the internal system...Because the proxy server cannot retransmit the packet with the internal IP address, it replaces it with its own external address")

Claim 11 is also rejected since claim 11 recites an apparatus that contains substantially the same limitations as recited in claim 1.

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Regarding claim 2, Northrup discloses the method of claim 1 wherein step a) comprises the step of analyzing at least one of the packet's source and destination addresses. (page 19, section "Transparaent Proxying", subsection "How Does Transparent Proxying Work?", paragraph beginning "When transparent proxy servers forward traffic...", specifically "When transparent proxy servers forward traffic, they strip off and replace both the data-link layer header and the network-layer header. When the proxy server receives the packet, the source IP address identifies the internal system...Because the proxy server cannot retransmit the packet with the internal IP address, it replaces it with its own external address")

Regarding claim 3, Northrup discloses the method of claim 2 wherein the source and destination addresses are Media Access Control addresses. (page 19, section "Transparaent Proxying", subsection "How Does Transparent Proxying Work?", paragraph beginning "When traditional routers forward traffic...", specifically "When traditional routers forward traffic, they strip off and replace the data-link-layer, replacing the MAC address..." and paragraph beginning "When transparent proxy servers forward traffic...", specifically "When transparent proxy servers forward traffic, they strip off and replace both the data-link layer header and the network-layer header.")

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Regarding claim 4, Northrup discloses the method of claim 1 wherein step c) comprises the step of determining whether the transaction is a read transaction. (page 11, section "section "Application-Layer Proxying", subsection "Specific Applications", paragraph beginning "HTTP proxies work by accepting connections from a client...", specifically "Because the Web browser is configured to contact a proxy server, the Web browser sends the following request to the proxy server: "GET http://www.idgbooks.com HTTP 1.0" and paragraph beginning "As you learned in Chapter 16...", specifically "The proxy server examines the information in the URL, checks the protocol, and notices that the client is requesting a connection to an HTTP server." and paragraph beginning "Because the client issued a GET command...", specifically "Because the client issued a GET command, the server will also issue a GET command")

Regarding claim 6, Northrup discloses the method of claim 4 wherein upon a positive determination in step c), step d) comprises the step of determining whether the content requested by the read transaction is locally available. (page 23, section "Caching", paragraphs beginning "Here's an example. Joe's a member of a 500-person..." and "However, the benefits of caching will soon become...", specifically "As they request the same scores that Joe was looking at, their requests are sent to the

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proxy server as well. The proxy server then returns those requests from the information it had gathered in the course of processing Joe's request.")

Regarding claim 7, Northrup discloses the method of claim 6 wherein upon determination that the content requested by the read transaction is locally available, step d) further comprises the step of fulfilling the read request using locally available data. (page 23, section "Caching", paragraphs beginning "Here's an example. Joe's a member of a 500-person..." and "However, the benefits of caching will soon become...", specifically "As they request the same scores that Joe was looking at, their requests are sent to the proxy server as well. The proxy server then returns those requests from the information it had gathered in the course of processing Joe's request.")

Regarding claim 8, Northrup discloses a system for improving network database performance comprising:

a) a database server communicatively coupled to the network; ("server"; page 1, paragraph beginning "Proxy server is a general term for any node on a network...")

b) a client communicatively coupled to the network; ("client"; page 1, paragraph beginning "Proxy server is a general term for any node on a network...") and



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c) a database accelerator communicatively coupled to the network ("proxy server"; page 1, paragraph beginning "Proxy server is a general term for any node on a network...") comprising:

i) a packet interrogator for determining whether packets on the network are database transaction packets, determining the source and destination addresses of the packets, and determining the nature of the database transactions, (page 11, section "section "Application-Layer Proxying", subsection "Specific Applications", paragraph beginning "HTTP proxies work by accepting connections from a client...", specifically "HTTP proxies work by accepting connections from a client, listening to the command the client issues, and interpreting that command, which initiates an outbound connection"; page 19, section "Transparaent Proxying", subsection "How Does Transparent Proxying Work?", paragraph beginning "When transparent proxy servers forward traffic...", specifically "When transparent proxy servers forward traffic, they strip off and replace both the data-link layer header and the network-layer header. When the proxy server receives the packet, the source IP address identifies the internal system...Because the proxy server cannot retransmit the packet with the internal IP address, it replaces it with its own external address")

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ii) a packet interceptor for intercepting database transaction packets, (page 1, paragraph beginning "Proxy server is a general term...", specifically "Proxy server is a general term for any node on a network that accepts or intercepts connections from clients..."; page 11, section "Application-Layer Proxying", subsection "Specific Applications", paragraph beginning "HTTP proxies work by accepting connections from a client...", specifically "HTTP proxies work by accepting connections from a client, listening to the command the client issues, and interpreting that command...") and

iii) a transaction accelerator for accelerating transactions between a database server and a client. (page 11, section "section "Application-Layer Proxying", subsection "Specific Applications", paragraph beginning "HTTP proxies work by accepting connections from a client...", specifically "HTTP proxies work by accepting connections from a client, listening to the command the client issues, and interpreting that command, which initiates an outbound connection"; page 23, section "Caching", paragraphs beginning "Here's an example. Joe's a member of a 500-person..." and "However, the benefits of caching will soon become...", specifically "As they request the same scores that Joe was looking at, their requests are sent to the proxy server as well. The proxy server then returns those

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requests from the information it had gathered in the course of processing Joe's request.")

Regarding claim 9, Northrup discloses the system of claim 8 wherein the network is an Ethernet network. ("LAN"; page 2, section "Conserving the Public Address Space", paragraph beginning "This recommendation has been difficult to implement...")

Regarding claim 10, Northrup discloses the system of claim 8 further comprising storage communicatively coupled to the network for implementing caching techniques. (page 3, section "Proactive Caching", paragraph beginning "Passive or on-demand caching...", specifically "Passive or on-demand caching is the mechanism proxy servers use to store remote Web pages so that they may be served directly from the cache...")

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

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The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims are rejected under 35 U.S.C. 103(a) as being unpatentable over Northrup et al in view of "RFC 2616".

Regarding claim 5, Northrup discloses the method of claim 4.

Northrup does not expressly disclose wherein step d) comprises the step of implementing cache coherency techniques upon a negative determination in step c), however, Northrup does disclose wherein a negative determination of step c) may comprise a different set of transactions (page 11, paragraph beginning "This was the simplest example of an HTTP proxy connection.")

"RFC 2616" discloses the step of implementing cache coherency techniques upon a negative determination in step c) (page 61, section 13.10 "Invalidation After Updates or

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Deletions", specifically "Some HTTP methods MUST cause a cache to invalidate an entry...These methods are: PUT, DELETE, POST"

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of these references since "RFC 2616" discloses that implementing cache coherency techniques upon a negative determination would prevent an inaccurate database transaction (page 61, section 13.10 "Invalidation After Updates or Deletions", specifically "That is, although [a cache entry] might continue to be 'fresh', they do not accurately reflect that the origin server would return..."). In view of these specific advantages and that both references are directed to methods that cause a cache coherency technique to be performed based on a specific method of transferring data in a network cache, one of ordinary skill would have been motivated to combine these references and would have considered them to be analogous to one another based on their related fields of endeavor.

### **Conclusion**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following prior art teaches the state of the art in network database acceleration ("proxy cache" or "transparent proxy"):

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US Patent 6 182 141 to Blum et al;

US Patent 6 389 462 to Cohen et al;

US Patent 6 578 113 to Krishnamurthy et al;

Chatel, M. "Request for Comments (RFC) 1919: Classical versus Transparent IP Proxies", The Internet Group, March 1996, 35 pages.

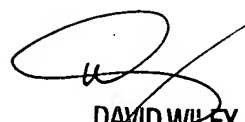
Any inquiry concerning this communication or earlier communications from the examiner should be directed to George C. Neurauter, Jr. whose telephone number is (571) 272-3918. The examiner can normally be reached on Monday through Friday from 9AM to 5:30PM Eastern.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wiley can be reached on (571) 272-3923. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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